



Canadian Société
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**VISION LOSS
REHABILITATION™**
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STRABISMUS IN CHILDREN

Misaligned or turned eyes

Left untreated, strabismus can impact the development of healthy vision.

What is strabismus?

Strabismus is the medical term that refers to any misalignment of the eyes, so that the eyes don't point in the same direction. This condition occurs in at least 5% of the population.

There are three common types of strabismus, based on the direction of the eye misalignment:

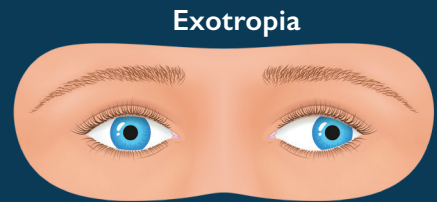
Esotropia (often called “crossed eyes”)

With esotropia, one or both eyes is turned in, toward the nose. A child might be born with this condition, or it may develop a few months after birth or around age 2 to 3.



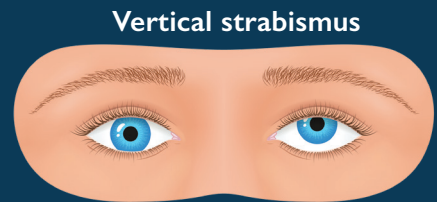
Exotropia (often called “wall-eye” in the past)

Exotropia is when one or both eyes is turned outward, away from the nose. A child is rarely born with this condition. More often, it develops later.



Vertical strabismus

In vertical strabismus, the eyes are out of alignment vertically. One eye may be higher or lower compared to the other eye.



How does strabismus affect vision?

Strabismus can cause a couple of different vision problems:

Defective binocular vision

The eyes need to be straight and focused on the same object for the brain to combine the images seen by the two eyes into a single picture. This gives us binocular (3-D) vision, which is important for depth perception. Any misalignment of the eyes can interrupt 3-D vision. If an eye is turned inward, it can also reduce the total field of vision.

Vision loss in the turned eye

When a child's eye is turned, they may end up with only partial sight in the affected eye. This happens because the brain may ignore the image from the misaligned eye, resulting in poor vision development in that eye. This condition is called **amblyopia**, or "lazy eye". This can also happen if the eyes are unequally focused.

Terms you might not recognize are highlighted in **bold** and explained in the glossary on page 6.

What causes strabismus?

Strabismus can have several possible causes:

- Hereditary (strabismus can run in families)
- Blurred or poor vision in one or both eyes (typically in children who are more farsighted than normal)
- A problem with the eye muscles or nerves
- Poor vision caused by a serious problem inside the eye, such as a tumour or cataract

Sometimes there is no cause identified for strabismus. The eyes are completely healthy and function properly aside from being misaligned.

Is my child especially at risk?

If any member of your immediate family has had strabismus or amblyopia, it's more likely that your child will have it. Often family members do not know exactly what eye condition they had as a child. However, if they recall wearing an eye patch or undergoing eye surgery as a child, then this can be a clue that they had amblyopia or strabismus. In this case, even if your child's eyes seem straight, they should be examined by a qualified eye care professional by their first birthday and again by age 3.

Premature birth, neurological diseases, and a family history of severe eye diseases are also reasons to have your child's eyes examined early.



All children should get an eye exam around age 3 to check for healthy eye development and detect common, treatable problems such as strabismus, amblyopia, or the need for glasses.

How is strabismus diagnosed?

A child can be checked at any age to see whether their eyes are properly aligned. If you're not sure whether your child's eyes are straight, ask your family doctor or a qualified eye care professional, who may refer you to an **ophthalmologist** for further evaluation.

Vision screening in children

All newborns should have their eyes checked in the hospital for visual problems, such as cataracts or lack of visual response. At well-baby visits during the first year of life, the child's primary care physician should check the eyes for basic alignment.

How is strabismus treated?

The goal of treatment is for your child to have good vision in each eye, as well as good binocular (3-D) vision. If your child's strabismus has caused amblyopia, treatment will aim at bringing the vision up to normal in the "lazy" eye first. This is commonly done by applying a patch over the stronger eye. Glasses may help for eyes that are out of focus, especially when one is much worse than the other. They may also help straighten the eyes. Surgery on the eye muscles may be necessary, especially when glasses aren't enough to straighten the eyes.



The earlier treatment is started, the more successful it is, and long-term vision problems can be prevented.

What results can I expect from strabismus treatment?

The results of treatment can be excellent. Often the eyes will be well aligned and vision can develop normally. It is common that shortly after surgery or many years later strabismus can return. Many patients after strabismus surgery will need another surgery at some point in their lifetime.

If treatment is delayed too long during childhood, it may not be possible for your child's vision to develop normally. This kind of vision problem can be effectively prevented, so it's important to seek professional advice as soon as possible.

Glossary

Amblyopia: A condition in which the vision in one eye doesn't develop properly in early childhood.

Ophthalmologist: A medically trained eye doctor and surgeon.



See The Possibilities

A resource for the Canadian public on the topics of vision health, serious eye diseases, and what the Canadian Ophthalmological Society is doing to promote eye health for everyone.

www.seethepossibilities.ca

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A not-for-profit national organization and Canada's leading provider of rehabilitation and healthcare services for individuals with vision loss.

www.visionlossrehab.ca

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